

### **REMARKS**

Claims 24, 31, 33, 35, 36, 40 and 41 are pending.

Claims 24, 31, 33, 35, 36, 40 and 41 are rejected.

Claims 24, 35, 40 and 41 have been amended. Support for these amendments can be found throughout the specification and drawings.

The Applicant wishes to express his appreciation to the Examiner for the courtesies extended to the Applicants' attorney, Preston Smirman, during a telephonic interview held on July 16, 2007.

This response is submitted in response to a Final Office Action and is deemed to place the application in a condition for allowance, or alternatively, in better condition for appeal.

### **STATEMENT OF THE SUBSTANCE OF THE INTERVIEW**

The Applicant provides the following statement of the substance of the interview. On July 16, 2007 a telephonic interview initiated by the Applicant was conducted, wherein independent claim 24, and those claims depending therefrom, as well as the drawings, were discussed in light of the rejections of the outstanding Final Office Action.

The Applicant agreed to amend claims 35, 40, and 41 to more clearly define that the subcombination of the nozzle body was being claimed, as opposed to a fuel injection system, in order to address the 35 U.S.C. 112, second paragraph rejection. Additionally, the cited references, Hofmann and Beele, that formed the basis of the 35 U.S.C. 103(a) rejection were discussed in view of the claims. Several proposed amendments to claim 24 were discussed

including adding further details regarding the nozzle itself, as well as the coatings. Agreement on the claims was not reached.

### **35 U.S.C. 112, SECOND PARAGRAPH REJECTION**

Claims 35, 40 and 41 stand rejected under 35 U.S.C. 112, second paragraph.

The Applicant respectfully traverses the 35 U.S.C. 112, second paragraph rejection of claims 35, 40 and 41.

In the interests of expediting prosecution of the instant application, and without admission that any amendment is required, the Applicant has amended claims 35, 40 and 41 to recite the injection nozzle as a subcombination, in accordance with the Examiner's suggestion.

The Applicant submits that the 35 U.S.C. 112, second paragraph rejection of claims 35, 40 and 41 has been overcome or rendered moot.

### **35 USC §103(a) REJECTION**

Claims 24, 31, 33, 35, 36, 40 and 41 stand rejected under 35 USC § 103(a) as being unpatentable over U.S. Patent No. 4,296,887 to Hoffman in view of U.S. Patent No. 6,528,189 to Beele.

The Applicants respectfully traverse the 35 USC § 103(a) rejection of claims 24, 31, 33, 35, 36, 40 and 41.

The standard for obviousness is that there must be some suggestion, either in the reference or in the relevant art, of how to modify what is disclosed to arrive at the claimed

invention. In addition, "[s]omething in the prior art as a whole must suggest the desirability and, thus, the obviousness, of making" the modification to the art suggested by the Examiner. *Uniroyal, Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 1051, 5 U.S.P.Q.2d (BNA) 1434, 1438 (Fed. Cir.), cert. denied, 488 U.S. 825 (1988). Although the Examiner may suggest the teachings of a primary reference could be modified to arrive at the claimed subject matter, the modification is not obvious unless the prior art also suggests the desirability of such modification. *In re Laskowski*, 871 F.2d 115, 117, 10 U.S.P.Q.2d (BNA) 1397, 1398 (Fed. Cir.1989). There must be a teaching in the prior art for the proposed combination or modification to be proper. *In re Newell*, 891 F.2d 899, 13 U.S.P.Q.2d (BNA) 1248 (Fed. Cir. 1989). If the prior art fails to provide this necessary teaching, suggestion, or incentive supporting the Examiner's suggested modification, the rejection based upon this suggested modification is error and must be reversed. *In re Bond*, 910 F.2d 831, 15 U.S.P.Q.2d (BNA) 1566 (Fed. Cir. 1990).

The law is also clear that a claim in dependent form shall be construed to incorporate all the limitations of the claim to which it refers. 35 U.S.C. 112, fourth paragraph.

In the interests of expediting the prosecution of the instant application, and without admission that any amendment is necessary, the Applicants have amended claim 24 to recite, among other things, an injection nozzle for use in delivering fuel to a combustion space, the injection nozzle comprising a nozzle body, the nozzle body including a substantially conical tip region extending along a longitudinal axis of the nozzle body, the tip region including an outlet opening, the outlet opening being oriented substantially transverse to the longitudinal axis, at least a part of the nozzle body being provided with a first coating and a second coating

applied to at least part of said first coating to form a multi-layer coating, said multi-layer coating arranged so as to reduce the temperature of at least a part of the nozzle body, in use, said first coating being formed from a material having a higher thermal conductivity than the thermal conductivity of the nozzle body, said second coating being formed from a material having a lower thermal conductivity than the thermal conductivity of the nozzle body.

Neither Hoffman and/or Beele, either alone or in combination therewith, disclose or suggest the invention as recited in claim 24, or any claims dependent therefrom.

As the Examiner has acknowledged, Hoffman fails to disclose or suggest “first and second coatings” on an injection nozzle. More importantly, Hoffman fails to disclose or suggest a nozzle body including a substantially conical tip region extending along a longitudinal axis of the nozzle body, the tip region including an outlet opening, the outlet opening being oriented substantially transverse to the longitudinal axis, as presently claimed.

Apparently, the Examiner cited Beele to remedy the deficiencies in the disclosure of Hoffman. However, Beele suffers from several deficiencies as well. Initially, Beele does not disclose an injection nozzle, but rather a turbine blade. Furthermore, Beele only discloses that the outer ceramic layer (element 4) is heat resistant and is silent that the other supposed “coatings” are also heat resistant. In fact, the other layers (elements 2 and 3) disclosed by Beele are actually tie layers to prevent spalling or separation of the ceramic layer 4. Additionally, as with Hoffman, Beele fails to disclose or suggest a nozzle body including a substantially conical tip region extending along a longitudinal axis of the nozzle body, the tip region including an outlet opening, the outlet opening being oriented substantially transverse to the longitudinal axis, as presently claimed.

Thus, one of ordinary skill in the art would not look to Hoffman and/or Beele, either alone or in combination therewith, for guidance on an injection nozzle, as presently claimed.

Because claim 24 is allowable over Hoffman and/or Beele, either alone or in combination therewith, for at least the reasons stated above, claims 31, 33, 35, 36, 40 and 41, which depend from and further define claim 24, are likewise allowable.

Accordingly, the Applicant contends that the 35 U.S.C. §103(a) rejection of claims 24, 31, 33, 35, 36, 40 and 41 has been overcome.

### **CONCLUSION**

In view of the foregoing, the Applicant respectfully requests reconsideration and reexamination of the Application. The Applicant respectfully submits that each item raised by Examiner in the Final Office Action mailed June 11, 2007 has been successfully traversed, overcome or rendered moot by this response. The Applicant respectfully submits that each of the claims in this Application is in condition for allowance and such allowance is earnestly solicited.

Serial No. 10/636,112  
Atty Docket: DP-303841

The Examiner is invited to telephone the Applicant's undersigned attorney at (248) 723-0487 if any unresolved matters remain.

Any needed extension of time is hereby requested with the filing of this document.

The Commissioner is authorized to charge any additional fees or credit any overpayment to Deposit Account No. 08-2789 in the name of Howard and Howard Attorneys, P.C.

**Respectfully submitted,**

**HOWARD & HOWARD ATTORNEYS, P.C.**

Dated: July 23, 2007

/Preston H. Smirman/

**Preston H. Smirman, Reg. No. 35,365**

39400 Woodward Avenue, Suite 101

Bloomfield Hills, Michigan 48304-5151

(248) 723-0487